

Breast Cancer Diagnosis Model Performance Report

Introduction

This report evaluates the performance of an ML model designed to classify breast cancer diagnoses into two categories: **Benign (non-cancerous)** and **Malignant (cancerous)**. The analysis is based on the Breast Cancer Diagnostic Dataset sourced from Kaggle, which includes labeled instances derived from diagnostic data.

Objective

The primary objective of this model is to ensure accurate identification of malignant cases, which is crucial for early detection and treatment. This report provides an overview of the model's performance.

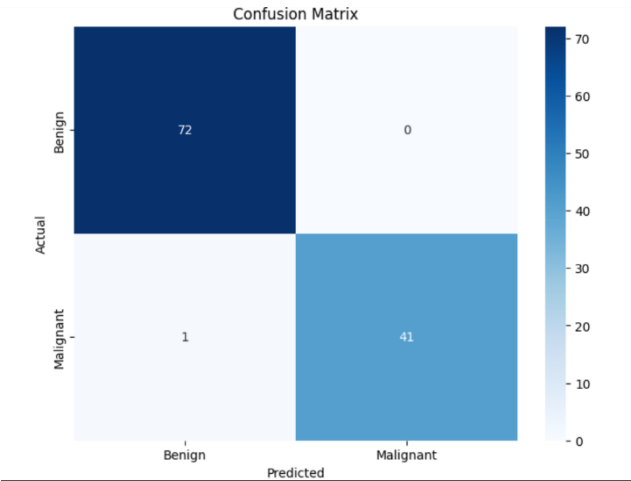
Model Performance

1. Performance Metrics

Classification Report:					
	precision	recall	f1-score	support	
0	0.99	1.00	0.99	72	
1	1.00	0.98	0.99	42	
accuracy			0.99	114	
macro avg	0.99	0.99	0.99	114	
weighted avg	0.99	0.99	0.99	114	

Accuracy: 0.99 (99%)

2. Confusion Matrix (classification outcomes)



Insights

Class 0 (Benign):

- Recall = 1.00: All benign cases were correctly identified.
- Precision = 0.99: Very few false positives for benign cases.

Class 1 (Malignant):

- Recall = 0.98: One malignant case was incorrectly classified as benign.
- Precision = 1.00: No false positives in identifying malignant cases.

Overall Performance

- The model demonstrates near-perfect precision, recall, and F1-scores, reflecting excellent classification ability with minimal errors.
- A single misclassification in the malignant class impacts its recall slightly.